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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,815	12/07/2001	Romel Amineh	367.40825X00	7745

20457 7590 10/04/2005

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EXAMINER

DANG, HUNG Q

ART UNIT PAPER NUMBER

2635

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/004,815

Applicant(s)

AMINEH, ROMEL

Examiner

Hung Q. Dang

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 July 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 13, 19 and 26 is/are allowed.  
6) ☒ Claim(s) 1,6-8,11,12,14-17 and 20-25 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 28 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This communication is in response to application's amendment received on 7/6/2005. The canceled claims 2-5, 9-10 and 18, the amended claims 1, 19, and the added claims 20-26 have been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Iggulden et al. U.S. Patent 5,579,002.

**Regarding claim 12**, Iggulden et al. teaches a method for inputting of data to a communication unit provided with a keypad (Figure 1, unit 12) wherein individual keys of said keypad are changeable to provide a sensory indication of the keys available to make the communication unit perform an action by pressing said changeable keys (Figure 7 and last paragraph of column 6), and that change of individual keys is

performed by having intra-changeable elements in said individual keys (units 120a and 120b of figure 7 are intra-changeable).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 14, 16, 20, 21 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venturini U.S. Patent 5,987,317.

**Regarding claims 1 and 16,** Venturini teaches a communication unit (Figure 1, unit 10) including a digital control (Figure 1, unit 18) with associated random access and read only memory (column 5, lines 50-57) for control of said communication unit, including intra-changeable elements (Figure 5, keys 22b1 or 22b2 are intra-changeable elements) controlled by said digital control, and where said elements are used in the user interface of said communication unit (See Figure 5).

Even though, Venturini does not specifically mention using RAM (random access memory), however, one skilled in the art would recognize that RAM has been commonly used in digital processing devices for loading up and process applications. Therefore, by conventionality, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide RAM to the communication unit disclosed by Venturini.

**Claims 14, 20, 21 and 24-25** are rejected for the same reasons as claim 1.

Venturini also teaches indicating the availability of the element for inputting data to the device (See figure 5, "listen" and "quit" indicate the availability/option of keys 22b1 and 22b2).

7. Claims 6-8, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venturini U.S. Patent 5,987,317 in view of Nomura et al. U.S. Patent 6,700,508.

**Regarding claims 6-8**, Venturini teaches a communication unit as claimed in claim 6, except wherein said intra-changeable elements are compressible and expandable.

Nomura et al. teaches a keypad, which includes keys that are compressible and expandable (by using piezo-electrical and elasto-resistive elements) when pressed so that the operator can feel a large stroke when a key top is pressed (column 2, lines 39-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide compressible/expandable keys to the communication unit disclosed by Venturini, as evidenced by Nomura et al., so that the operator can feel a large stroke when a key top is pressed.

**Regarding claim 17**, the changeable characteristic of the intra-changeable element disclosed by Nomura et al. also includes change in form (column 3, lines 38-

41). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide intra-changeable elements that can change form, to the communication unit disclosed by Venturini, as evidenced by Nomura et al., so that the operator can feel a large stroke when a key is pressed due to the compressible/expandable characteristic of said intra-changeable elements.

**Claim 15** is rejected for the same reasons as claim 17.

8. Claims 11, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venturini U.S. Patent 5,987,317 in view of Freeman et al. U.S. Patent 5,931,764.

**Regarding claims 11**, even though Venturini does not specifically suggest including said intra-changeable elements in the output device of said communication unit, however, one skilled in the art would recognize that such intra-changeable elements (piezo-electric elements) have been commonly equipped in the user interfaces, and output components (such as display, speaker) of communication units, as evidenced by Freeman et al. (column 2, lines 40-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide such intra-changeable elements to the output component of the communication unit disclosed by Venturini, as evidenced by Freeman et al., in order to provide sensory effect to the operator.

**Claims 22 and 23** are rejected for the same reasons as claim 11.

***Allowable Subject Matter***

9. Claims 12-15, 19-21 and 24-26 are allowed.

**Regarding claim 13**, the prior arts of record fail to teach or disclose a method for transferring an input from a first communication unit to a second communication unit, and displaying said input as output in said second communication unit, wherein operation of said first communication unit includes transforming the input from said intra-changeable elements of said input device to electrical signals; transferring said electrical signals from said first communication unit to a second communication unit; and wherein said second communication unit includes receiving said electrical signals from said first communication unit to said second communication unit; retransforming said electrical signals in said second communication unit to output signals to intra-changeable elements of said second communication unit; and transferring said output signals to said intra-changeable elements of said second communication unit and expand said intra-changeable elements according to said output signals.

**Regarding claims 19 and 26**, the prior arts of record fail to teach or disclose a communication device as claimed in claim 19, wherein the intra-changeable element generates a control signal in response to a change in its characteristic and wherein the communication device further comprises a transmitter for transmitting control signals generated by the changeable element in response to a physical deformation.

**Conclusion**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is (571) 272-3069. The examiner can normally be reached on 9:30AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (571) 272-3068. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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